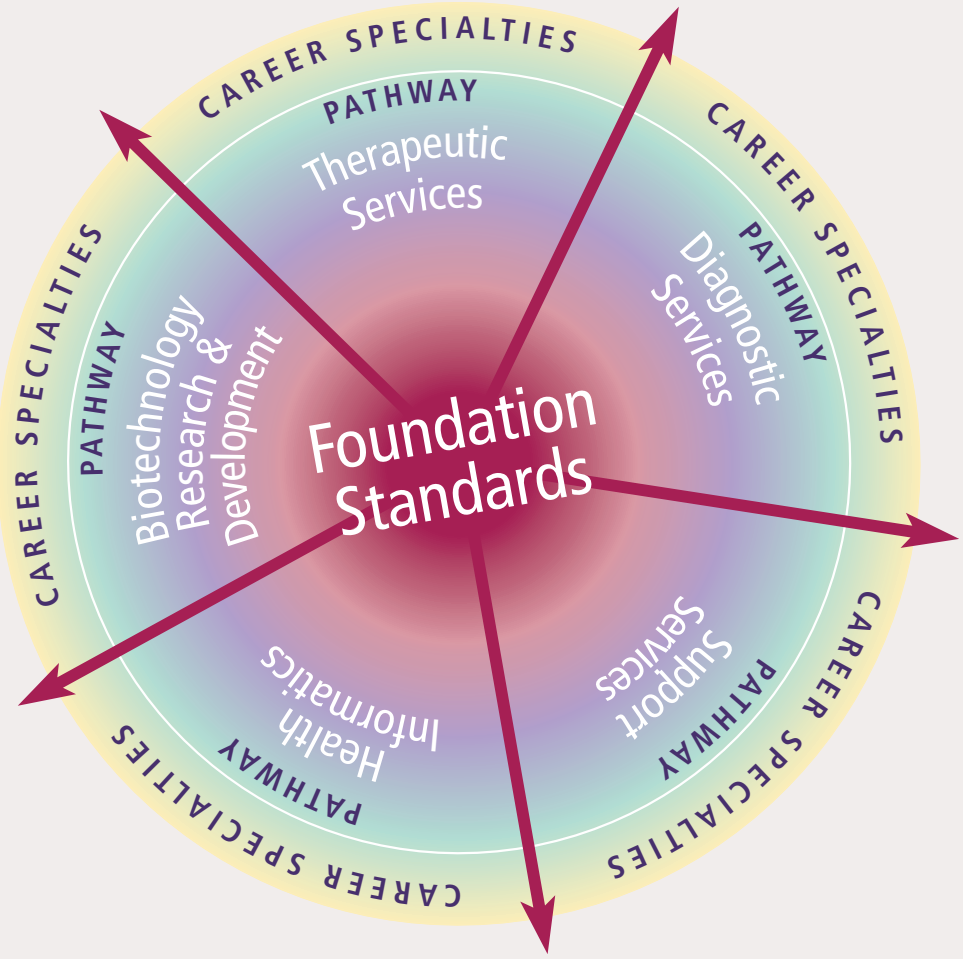
UTAH'S TOP TEN

HEALTH CARE CAREERS

Careers That Make A Difference

Table of Contents



Acknowledgements

Crossroads Area Health Education Center (AHEC)

Utah Hospitals and Health Systems Association

Utah State Office of Education, Health Science and Technology

Utah's educational programs provide students with the necessary knowledge and skills for health care career opportunities in many diverse settings.

This guide is a catalog of Utah's most in-demand health care careers. It is designed to assist teachers and counselors helping students become aware of and explore the diverse career opportunities in health care. High school courses in mathematics, physics, chemistry, biology, anatomy, physiology, language arts, health sciences, and computers will help students begin to prepare for careers in health care.

Health Science and Technology Education

Description

Health Science and Technology Education (HST) is a program that prepares students for pursuit of an appropriate health care career.

The program is based on:

- Employment needs of the health care community
- National Health Care Skill Standards
- Individual needs of students
- Health care leadership and technical skills
- Postsecondary education requirements

Mission

The mission of Health Science and Technology Education in Utah is to provide all students a seamless education system, through competency-based instruction, culminating in essential life skills, certified occupational skills, prepared for continued education and/or meaningful employment.

Health Occupations Students of America (HOSA)

HOSA is a student organization sponsored by HST education and is a critical component of the curriculum. HOSA provides students with opportunities to attain the knowledge, skills and leadership characteristics necessary to succeed in a health care career.

For additional information about health care careers including salaries, duties, responsibilities, education requirements and career videos, visit: www.acinet.org.

Registered Nurse

Registered nurses (RNs) work to promote health, prevent disease, and help patients cope with illness. They are advocates and health educators for patients, families, and communities. When providing direct patient care, they observe, assess, and record symptoms, reactions, and progress; assist physicians during treatments and examinations; administer medications; and assist in convalescence and rehabilitation. RNs also develop and manage nursing care plans; instruct patients and families in proper care; and help individuals and groups take steps to improve or maintain their health.

Work Environment

Registered nurses may work in hospitals, physicians' offices, nursing homes, patients' homes, or public health centers, or for industries or home health care companies.

Educational Requirements

All registered nurses must graduate from an approved nursing program. Various nursing programs require that candidates must be Certified Nurse Assistants to be considered for admission. There are two major paths in registered nursing:

- **Associate of Nursing Degree (ADN)**
  Programs are offered through community colleges and take two to three years to complete. Registered nurses with an associates degree can continue their education toward the Bachelor of Science in Nursing.
- **Bachelor of Science Degree in Nursing (BSN)**
  Programs are offered by colleges and universities and take four to five years to complete. Registered nurses with a Bachelor of Science degree can continue their education toward the Master of Science in Nursing (MSN) or Advanced Practice Registered Nursing/Nurse Practitioner degrees. Higher-level university programs administer these degrees.

SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook*

On-Line Resources

American Journal of Nursing
www.ajn.org

National League for Nursing
www.nln.org

OTHER CAREER OPPORTUNITIES IN NURSING

Licensed Practical Nurses (LPNs)

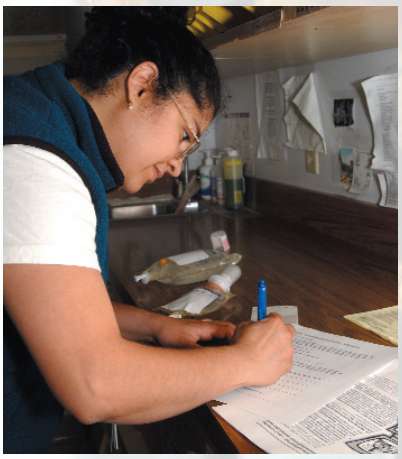
LPNs work in hospitals, nursing homes, long-term care facilities, and clinics to provide direct patient care. They work under the direct supervision of a physician or registered nurse and assist with patient care and other procedures. Many LPNs take competency examinations that allow them to administer certain medications and perform more advanced procedures.

Advanced Practice Nurses (APRNs)

APRNs include nursing practitioners, clinical nurse specialists, certified registered nurse anesthetists, and certified nurse midwives. These occupations require education and experience beyond a baccalaureate degree.

Pharmacist

Pharmacists ensure patients receive the correct and most effective medications in the correct amount for their condition. They determine the amount of medication according to factors such as patient weight, and prepare the medication accordingly. Pharmacists counsel and educate patients about the medications they have been prescribed, so that patients know the correct way to take their medicine. They teach patients about drug and food interactions. Many pharmacists are involved in research to develop more effective drugs for various illnesses.



Pharmacists in hospitals work in multidisciplinary teams where their knowledge of drug effects, side effects, and reactions with other drugs is needed to recommend the best medication for each patient. They offer recommendations to the physician about which drugs are most effective and which might interfere with each other's effectiveness.

Work Environment

Pharmacists may work in hospitals, clinics, retail pharmacies, or for mail-order pharmacies or pharmaceutical wholesalers.

Educational Requirements

In Utah, pharmacists must attain a graduate degree (PharmD), and receive licensing from the Utah Division of Occupational and Professional Licensing.

SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook.*

On-Line Resources

Utah State Board of Pharmacy
www.dopl.utah.gov/licensing/pharmacy.html

National Pharmacists Association
www.npha.com

American Society for Health-Systems Pharmacists
www.ashp.org

OTHER CAREER OPPORTUNITIES IN PHARMACY

Pharmacy Technician

Pharmacy technicians work closely with pharmacists to help prepare prescribed medication for patients. They receive written requests for prescriptions or refills from patients or patient representatives and verify that the information is complete and accurate prior to preparing the prescription. To prepare a prescription, pharmacy technicians retrieve, count, pour, weigh, measure, and sometimes mix medication. They prepare labels and price and file the prescription.

Pharmacy technicians also answer telephones, handle sales transactions, prepare insurance claim forms, stock and inventory supplies, and perform other clerical duties such as record keeping.

Radiologic Technologist

Radiologic technologists work under the direction of a medical doctor or radiologist. They diagnose patient problems using imaging (X-ray) devices and also give radiation therapy treatments. They use X-ray machines, ultrasound machines, magnetic resonance scanners, positron emission scanners, and other technologically advanced machines to diagnose illnesses and injuries. Radiologic technologists place the equipment at the correct angle and distance from the patient to make the appropriate images for the physician. They are also involved in direct patient contact: preparing the patient for the procedure, positioning the patient, and explaining the procedure and its benefits. Radiologic technologists continue to provide patient care throughout the procedure.

There are many possible career options for radiologic technologists. Four general areas of practice include:

Radiographers

Radiographers produce X-ray films of parts of the human body for use in diagnosing medical problems. They may also perform more complex imaging tests such as computerized tomography (CT) scanning, or magnetic resonance imaging (MRI), and can develop into other specialty areas like angiography and mammography.

Nuclear Medicine Technologists

Nuclear Medicine Technologist use special cameras and radiopharmaceuticals to create images of human organs and examine their function.

Sonographers

Sonographers direct nonionizing, high frequency sound waves into areas of the patient's body to collect reflected echoes to form an image.

Radiation Therapists

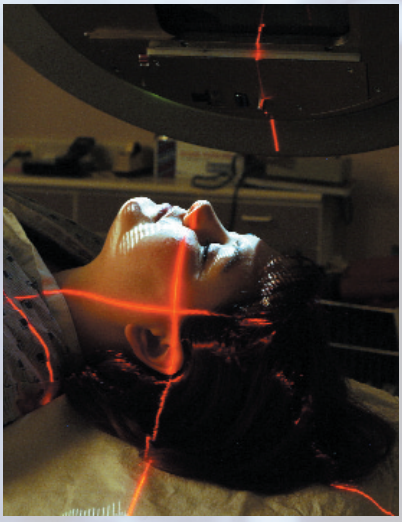
Radiation Therapists treat cancer and other illnesses through very focused forms of radiation.

Work Environment

Radiologic technologists may work in hospitals, clinics, urgent care centers, nursing homes, and in private industries.

Educational Requirements

Students must earn a bachelor of science degree in radiology and be licensed by the Utah State Board of Radiology.



SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook*

On-line Resources

American Society of Radiologic Technologists (ASRT)
www.asrt.org

OTHER CAREER OPPORTUNITIES IN RADIOLOGY

Radiology Technician

Radiology technicians do much of the same work as radiologic technologists, but their duties are more limited in scope.

Clinical Laboratory Technologist

Clinical laboratory testing is crucial to detection, diagnosis, and treatment of disease. Clinical laboratory technologists, also referred to as *clinical laboratory scientists or medical technologists*, perform most of these tests.

Clinical laboratory technologists examine and analyze body fluids, tissues, and cells. They look for bacteria, parasites, and other microorganisms; analyze the chemical contents of fluids; match blood for transfusions; and test for drug levels in the blood to show how a patient is responding to treatment. They use automated equipment and instruments capable of performing a number of tests simultaneously, as well as microscopes, cell counters, and other sophisticated laboratory equipment. They analyze the data and relay the results to physicians.

Work Environment

Clinical laboratory technologists may work in hospitals, clinics, urgent care centers, nursing homes, and in private industries.

Educational Requirements

Clinical laboratory technologists usually have a bachelor's degree with a major in medical technology or in one of the life sciences.

Universities and hospitals offer medical technology programs. It is also possible to qualify through a combination of education, on-the-job, and specialized training.

SOURCES: National Health Council, *270 Ways to Put Your Talent to Work in the Health Field*

U.S. Department of Labor, *Occupational Outlook Handbook*

On-Line Resources

American Society of Clinical Pathologists
www.ascp.org

American Society for Clinical Laboratory Science
www.ascls.org

International Association of Medical Laboratory Technologists
www.iamlt.org

American Medical Technologists
www.amt1.com

American Association of Bioanalysts
www.aab.org

OTHER CAREER OPPORTUNITIES IN CLINICAL LABORATORIES

Clinical Technician

Clinical laboratory technicians perform less complex tests and laboratory procedures than technologists. Clinical technicians generally have either an associate's degree from a community college or a certificate from a hospital or applied technology college.

Therapy

RESPIRATORY THERAPISTS

Respiratory therapists evaluate, treat, and care for patients with breathing disorders. To evaluate patients, therapists test the capacity of the lungs, and analyze oxygen and carbon dioxide concentrations. They also measure a patient's potential of hydrogen (pH), which indicates the acidity or alkalinity level of the blood.

Respiratory therapists may provide care for patients suffering from asthma, emphysema, and other breathing disorders; provide care for infants with underdeveloped lungs; provide emergency breathing support for patients who have suffered from heart failure, stroke, drowning, shock, etc.; and educate patients and their families about proper home care.

Work Environment

Respiratory therapists typically work in hospitals, nursing homes, home health care agencies, and respiratory therapy clinics.

Educational Requirements:

The National Board of Respiratory Care offers voluntary certification and registration to graduates of accredited programs. The following credentials are available:

- Registered Respiratory Therapist (RRT) (BS degree)
- Certified Respiratory Therapist (CRT) (AS/Certificate)

SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook*

On-line Resources

The National Board of Respiratory Care, Inc.
www.nbrc.org

SPEECH-LANGUAGE PATHOLOGISTS

Speech-language pathologists work with people who wish to improve their communication skills. These include people who

are unable to make speech sounds or cannot be understood clearly; or who have rhythm or fluency problems such as those who experience stuttering, or harsh or unusual pitch tones. They may also work with people who have attention, memory or problem-solving disorders; or problems with eating and swallowing.

Work Environment

Speech pathologists work in clinical settings in hospitals and other medical facilities, speech and language clinics, schools, and private counseling offices. They often work with physicians, social workers, psychologists, and other therapists. They can work with individuals or group sessions.

Educational Requirements

A master's degree in speech-language pathology is the standard credential.

AUDIOLOGISTS

Audiologists work with people who have hearing, balance, and related problems. They use computers, audiometers, and other electronic devices to measure the sounds and tones a person can hear. They measure people's ability to hear loudness, to distinguish between sounds, and the extent of any hearing loss. Treatment by audiologists may include ear examination, cleaning, fitting and dispensing hearing aids, and rehabilitation such as lip reading.

Work Environment

Audiologists often work in a clinic, hospital, or school setting. The job is not physically demanding but does require attention to detail and intense concentration.

Educational Requirements

A master's degree is most often required to work as an audiologist.

SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook*

On-Line Resouces

American Speech-Language-Hearing Association
www.professional.asha.org

Dietician

Dieticians plan food and nutrition programs, and supervise the preparation and serving of meals. They help prevent and treat illnesses by promoting healthy eating habits and suggesting diet modifications, such as less salt for those with high blood pressure or reduced fat and sugar intake for those who are overweight. Dieticians run food service systems in institutions such as hospitals and schools, promote sound eating habits through education, and conduct research. Major areas of practice include clinical, community, management, and consultant dietetics.

Work Environment

Dieticians may work in hospitals, doctor offices, clinics, nursing and personal care facilities, home health agencies, schools, sports teams, and supermarkets.

Educational Requirements

Dietician education includes academic coursework and hands-on clinical experience.

Most programs also include completing an internship in an accredited program. Dieticians typically earn a bachelor's or master's degree.

SOURCES: U.S. Department of Labor, *Occupational Outlook Handbook*

On-Line Resources

American Dietetic Association
www.eatright.org

Surgical Technologist

Surgical technologists are members of the surgical team and work closely with surgical registered nurses, anesthesiologists, and surgeons.

Surgical technologists organize and set up supplies and instruments while maintaining the sterile environment; assist with preparing patients for surgery by washing, shaving, and disinfecting incision sites; observe patients' vital signs, check charts, and assist the surgical team scrub and put on gloves, gowns, and masks; and assist the surgeons performing the surgeries by passing instruments and supplies, holding retractors, cutting sutures, counting sponges and needles, etc.

Work Environment

Surgical technologists may work in a hospital's main operating room; at a surgical center in a doctor's office with physicians and/or dentists who perform outpatient surgery; or as part of a specialty team such as harvest, transplant, cardiac, etc.

Educational Requirements

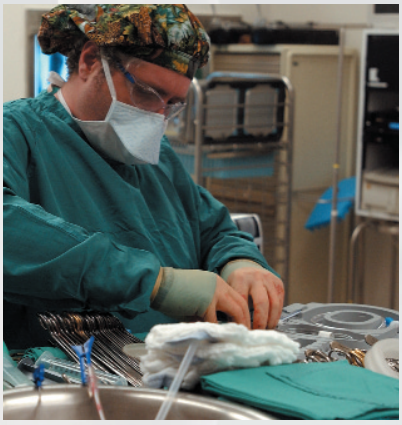
Most educational programs for surgical technologists last approximately one year and result in a certificate.

SOURCES: IHC Central Processing Department, *Human Resources Reference Book*

International Association of Healthcare, *Central Service Material Management*

U.S. Department of Labor, *Occupational Outlook Handbook*

U.S. Department of Labor, Bureau of Labor Statistics, *Occupational Outlook Handbook*



On-Line Resources

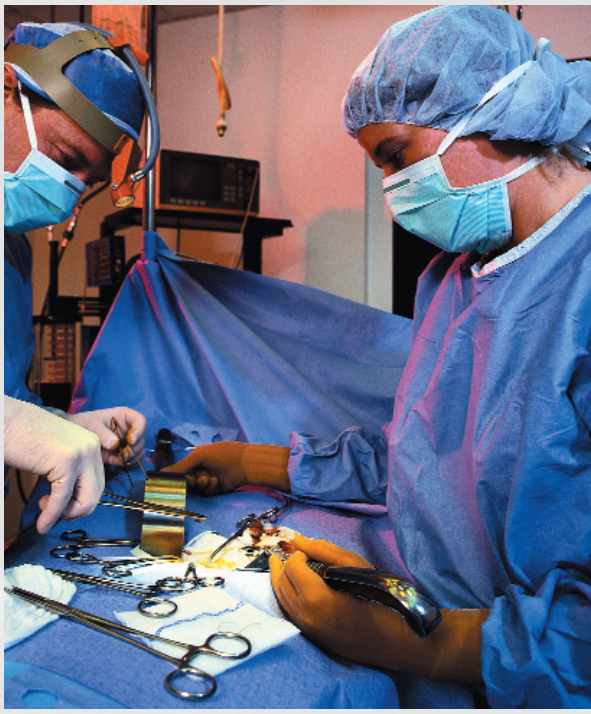
Liaison Council on Certification for the Surgical Technologist
www.lcc-st.org

Association of Surgical Technologists
www.ast.org

OTHER SURGICAL CAREER OPPORTUNITIES

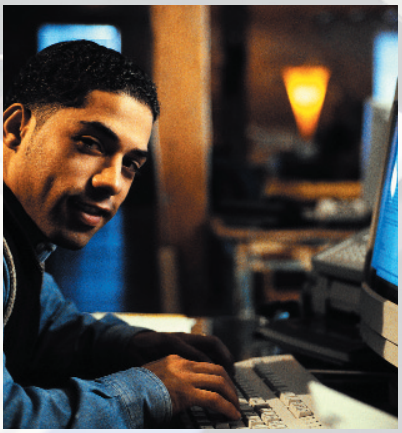
Central Technician

Central sterile departments (called central supply departments in some hospitals) are responsible for washing and sterilizing certain patient care equipment and instruments and issuing patient care supplies, as well as delivering equipment to patient care units.



Medical Coder

Medical coders record patient information. They assign a medical code to each diagnosis and procedure. They consult classification manuals and rely on their knowledge of disease processes. Medical coders use computer programs to tabulate and analyze data to improve patient care and control costs, for use in legal actions, in response to surveys, or for use in research studies.



Medical coders' duties vary according to the size of the facility in which they work. They work in offices and have little or no contact with patients. Because accuracy is essential, coders must pay close attention to details.

Work Environment

Medical coders may work in hospitals, medical clinics, doctor offices, nursing homes, or for home health agencies.

Educational Requirements

Medical coders entering the field are required to achieve a national certificate. Additional associate's and bachelor's degrees are available.

SOURCES: U.S. Department of Labor, *Occupational Outlook Handbook*

On-line Resources

American Health Information Management Association
www.ahima.org

PHYSICIAN

Physicians and surgeons work with patients suffering from injury or disease. In the course of their duties, they examine patients; obtain medical histories; order, perform and interpret diagnostic tests; diagnose illnesses; prescribe and administer treatment; and counsel patients on diet, hygiene, and preventive health care.

The majority of physicians are primary care physicians and practice in the areas of family medicine, internal medicine, and pediatrics. Physicians may certify as surgeons and in other specialties, such as obstetrics and gynecology, cardiology, psychiatry, and many other specialties.

Work Environment

Physicians work in hospitals, clinics, or private offices, often assisted by a small staff of nurses and other administrative personnel. Increasingly, physicians practice in groups or health care organizations that provide back-up coverage and allow for team coordination of patient care.

Educational Requirements

The minimal educational requirement for admission into a medical school is three years of college; however, most applicants have at least a bachelor's degree. It takes many years of education and training to become a physician: four years of undergraduate school, four years of medical school, and three to eight years of internship and residency, depending on the specialty selected.

SOURCE: U.S. Department of Labor, *Occupational Outlook Handbook*

On-Line Resources

Association of American Medical Colleges
www.aamc.org

American Medical Association
www.ama-assn.org

OTHER CAREER OPPORTUNITIES

Physician's Assistant

Physician's assistants perform duties similar to the physicians who supervise them. They examine patients and diagnose their illnesses using technology like X-rays and laboratory tests.

They treat patients (depending on state law, they may prescribe medications) and educate patients about their illnesses and ways to stay healthy in the future. Physician's assistants work most commonly in doctors' offices, but are also found in hospitals, health clinics, and nursing homes. Many times they provide medical services to geographical areas where there are few physicians.

Working as a physician's assistant requires a bachelor's or a master's degree and training in an accredited Physician's Assistant program, which is a two-year training program.

SOURCE: Health Resources and Services Administration

Patient Care Support

MEDICAL ASSISTANT

Medical assistants perform both clinical and administrative duties in medical settings. Administrative work includes answering phones, keeping patient records updated and complete, handling insurance forms and appointments for patients, and doing medical billing. Clinical work includes preparing patients for the physician by helping them get ready for an exam, taking a medical history, and recording vital signs. They assist during the exam by drawing blood and preparing laboratory specimens, and sometimes performing basic lab tests. They may educate patients about medications and special diets, and can remove sutures, change dressings, and prepare patients for X-rays.

Work Environment

Medical assistants work in hospitals, clinics, and doctors' offices.

Educational Requirements

There are one-year certificate and two-year associate's degree medical assisting programs.

SOURCE: American Association of Medical Assistants

CERTIFIED NURSE ASSISTANT (CNA)

Certified nurse assistants work under the direct supervision of a registered nurse. They provide direct patient care including, but not limited to, bathing and dressing patients, taking and recording vital signs (pulse, respiration, and blood pressure), providing assistance with walking and moving patients, and providing a clean and safe environment for patients.

CNAs work in hospitals, nursing homes, long-term care facilities, and clinics to provide direct patient care.

Educational Requirements

Certified nurse assistants must complete a minimum of 80 hours of training and pass a state competency examination. They must be registered by the Utah Nurse Assistant Registry.

HOME HEALTH AIDES

Home health aides assist elderly, convalescent, or disabled persons to live in their own homes instead of in a health care facility. Under the direction of nursing and medical staff, home health aides provide health-related services including routine personal care and housekeeping. Like certified nurse assistants, home health aides may check pulse, respiration and blood pressure, assist with simple prescribed exercises, bathing, grooming and dressing.

Work Environment

Home health aides may go to the same patient's home for months or even years. Some patients only required care while recuperating from a surgery or accident; others require long-term care. Home health aides generally work alone, with periodic visits by their supervisor. They receive detailed instructions explaining when to visit patients and what services to perform. Work as a home health aide can be both physically and emotionally demanding. This occupation offers the home health aide flexible scheduling and the opportunity to arrange schedules for other educational opportunities.

Educational Requirements

All health care agencies require home health aides to be certified nurse assistants with CPR certification and at least 18 years of age.

Tips for Students

Look Ahead

Make sure students have met or have planned to meet appropriate postsecondary health science program prerequisites. Students interested in a health care career should take higher levels of mathematics, science, and language arts. However, many health care career options are available to students who do not have strong mathematics, science, and/or language arts skills, so do not discourage those who believe they are not skilled in these academic subject areas.

Enroll Early

Encourage students to begin the enrollment and application process for health science programs a full year before they plan to be accepted. Missing an enrollment or application deadline can mean considerable delay in and worry about reaching their career goals.

Find Alternative Options

Encourage students to have other options in mind, in case coursework or abilities do not correlate with high entrance requirements.

Gain Some Experience Before Making Career Decisions

Encourage students to participate in Work-based Learning (WBL) activities that will expose them to the type of career that they are considering. Some possibilities include volunteer work, community service, job shadowing, internships, summer camps, and/or part-time work. Students can determine from practical experience whether they like the work and the health care environment. They may discover that they want to focus on a certain area of health care, or find that a different direction in health care is more appealing. For additional information on WBL, go to www.usoe.k12.ut.us/ate/wbl/wbl.htm

Know Interests and Preferences

Students should exhibit the following characteristics: working with people; activities of a scientific and technical nature; working with processes, equipment, and techniques; and helping others.

Gauge Abilities and Skills

Evaluate whether students communicate well; work effectively with others; evaluate information based on personal judgment and/or measurable standards; perform a variety of duties that may change frequently; use logical, clear, step-by-step procedures in their work; and work with precise limits or standards of accuracy.

Prepare Now

Take advantage of secondary health science courses/programs, Area Health Education Center activities, district applied technology centers, applied technology colleges, community colleges, universities, graduate schools, and military training. Additional information on health science programs is available at www.usoe.k12.ut.us/ate/HST/hst.htm

On-Line Resources

America's Career Info Net
www.acinet.org

Comprehensive career site featuring wages and trends, individual state information, and other career tools and resources.

Assessment.com
www.student.assessment.com

Tools for students to identify career options, classes to help career preparation, learning styles and careers that match students' motivations.

Career Explorations
www.careernet.org/careers/descriptions.html

Offers career descriptions, education and training information, and links to financial aid and scholarships.

HealthWeb
www.healthweb.org

Links to medical education websites and specific professions.

Job Shadow Day
www.jobshadow.monster.com

Information for having your own job shadow days, profiles of real-life professionals with tips and job insights.

Kids Into Health Careers
www.bhpr.hrsa.gov/kidscareers

Site for children to explore possibilities in health careers.

National Institute of Health
www.nih.gov

Presents employment opportunities, health information, grants and funding opportunities, news, and scientific resources.

Notes

This guide has been published through a partnership of Crossroads Area Health Education Center (AHEC); Utah Hospital and Health Systems Association; and the Utah State Office of Education, Health Science and Technology.